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Drawing logical conclusions.

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This article recounts the history of Venn-type diagrams, which (so far as is known) were first used to illustrate syllogistic arguments. As Bennett explains, it is well known that L. Euler used such diagrams in the 1760s as a teaching aid in his [*Letters of Euler on different subjects in physics and philosophy. Addressed to a German princess*, Murray and Highley, London, 1802]. However, it is certain that he was not the first. The principal finding of this paper is that Leibniz, in a fragment that was not published until 1903, had diagrams that are identical to Euler's aside from the labeling. Bennett notes that letters were a semi-public medium in Leibniz's day, and it is possible that Euler learned of this diagrammatic technique from Leibniz, perhaps through an intermediary such as the Bernoullis. By Venn's time, it had become commonplace in logic textbooks. Bennett's article describes the advantages of Venn's version over its predecessors. The chief of these is that Venn represented all three propositions of a syllogism on one diagram rather than drawing a separate diagram for each. She concludes with illustrations of diagrams that can represent five, six and eleven categorical propositions.

Leibniz is not the only candidate for the distinction of having invented these diagrams. Sir William Hamilton [*Lectures on metaphysics and logic*, William Blackwood and Sons, Edinburgh, 1860 (p. 180)] refers to a work by Christian Weise (1642–1708), published posthumously in 1712. Since both Leibniz's and Weise's diagrams were unpublished in their lifetimes, it may not be possible to establish priority.

It may be of interest to readers of this article that S.-J. Shin [*The logical status of diagrams*, Cambridge Univ. Press, Cambridge, 1994; [MR1312613](#)] presents Venn-type diagrams as a formal system, specifies rules of transformation and shows that the resulting system is sound and complete. For a review, see [B. Larvor, *Int. Stud. Philos. Sci.* **10** (1996), no. 2, 177–179, [doi:10.1080/02698599608573537](#)].

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